

- (I) subscribers in rural areas to be able to receive through telephone lines --
  - aa) conference calling;
  - bb) video images; and,
  - cc) data at a rate of at least 1,000,000 bits of information per second; and,
- (II) the proper routing of information to subscribers.<sup>19/</sup>

The Rural Utilities Service ("RUS") has promulgated rules implementing the above statute.<sup>20/</sup> Implementation plans from thirty states have been filed with the RUS and the RUS expects to receive plans from ten more. These network modernization standards unambiguously express the minimum standards that Congress defines as the prerequisite for federal rural telephone loans, and the 30 state plans reflect the network standards state commissions or borrowers believe are appropriate for rural carriers in their states. Clearly, if policy makers (Congress and state commissions) set these minimum standards for rural telephone companies, they should also be the minimum standard for all local telecommunications providers. Said differently, it would not be sensible telecommunications policy to hold rural telephone utilities to a standard higher than other telecommunications providers. Certainly, networks capable of one Megabit transmission speeds and video transmission, as required by the Rural Electrification Act, could provide the type of broadband access that schools, libraries, health care

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<sup>19/</sup> 7 U.S.C. §935(d)(3)(B). [emphasis added]

<sup>20/</sup> 7 C.F.R. §1751.106 *et seq.*

providers and others seek, and should be a prerequisite to receiving universal service support.

Many commentators observed that while high-speed, broadband services like ISDN were desirable, it is inappropriate to expand universal service to include such services. Ameritech, for example, argued

It would be a mistake to let regulation, rather than market demand, drive service parameters. For example, some argued in the past that the Commission should order carriers to deploy fiber to the home because they thought fiber was necessary to deliver advanced telecommunications services. As it turned out, however, advances in compression technology facilitated the provision of some advanced services over copper wire and that, in turn, made fiber uneconomic at least in some situations. Thus, while the Act may require the creation of certain support mechanisms, the lesson learned in the case of compression technology suggests that the Commission should avoid mandating the deployment of any particular technology and services or fixed timetables for deployment.<sup>21/</sup>

MFS agrees; such an expansion of services or deployment of facilities would greatly increase the universal service subsidy required for low income and high-cost customers and likely would distort the development of competition to provide such advanced, high-speed services. However, it is possible to greatly enhance the ability of users, telephone companies and competitors to derive high-speed, broadband access by simply requiring local exchange carriers to unbundle their local networks in a manner that eliminates the impediments to such access. For example, if a carrier unbundles its local loops to provide end-to-end metallic connections (without the electronics and

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<sup>21/</sup> Ameritech Comments at pp. 15-16.

functionality typically applied to such loops in order to provide full-fledged local telephone service),<sup>22/</sup> such unbundled loops could be used by customers and competitors to configure high-speed, broadband services like ISDN, ADSL or HDSL by adding the appropriate electronics.<sup>23/</sup> Just as an incumbent provider has access to its loop components that could be configured to provide ISDN, ADSL or HDSL access, competitors and users should also have access to the same network components on an unbundled basis. A library that wants high-speed access to the Internet could buy an unbundled metallic local loop from the local telephone carrier and could collaborate with the incumbent or a competing carrier to add the appropriate electronics to configure ADSL or HDSL service over that loop. Likewise, a competitor that wishes to serve the library or any other customer could obtain the unbundled local loop from the telephone company, add its own electronics, and provide the customer with the high-

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<sup>22/</sup> Of course, incumbent carriers have begun deploying electronics in some loop plant. MFS does not seek to "turn back the clock." Rather, the incumbent should be required either to permit competing carriers to collocate wherever it installs loop electronics or it should provide high-speed access from those points to the host central offices. These details are more appropriately addressed in the Commission's interconnection docket, but the Commission and Joint Board should establish the general requirement in this proceeding.

<sup>23/</sup> ADSL (Asymmetric Digital Subscriber Line) is a technology that uses local loops to provide video or data services by transmitting digital information from the network to the user at rates from 1.5Mb to 6Mb and transmitting from the user to the network at 576Kb per second. HDSL (High-Bit-Rate Digital Subscriber Line) is a new technology that allows DS1 level transmission on two copper wire pairs or a half of a DS1 transmission capability on a single copper wire pair.

speed access it desires. Competition for the provision of broadband services using the unbundled loop would drive down the price of such services rather than government-mandated discounts. Such a mechanism would be entirely consistent with the pro-competition, deregulatory intent of the Telecommunications Act.

Requiring that local loops be provided on an unbundled basis eliminates the need to discount the provision of ISDN, T-1 or other broadband services and address the recovery of ISDN or T-1 service provided below costs. It also eliminates the competitive impediment faced by new entrants who must physically deploy duplicative facilities to provide competitive broadband services. In most cases, the provision of unbundled local loops will require neither new services nor new facilities, but merely a rearrangement and reconfiguration of existing facilities that does not burden incumbent local exchange carriers by requiring them to install new equipment or lines. As the American Library Association argued in its comments, if the unbundled local loops are provided at cost (as measured by the lowest price such unconditioned lines are presently offered at or long-run incremental costs), such unbundling places no incremental economic burden on incumbent local telephone companies.<sup>24/</sup> Thus, no additional subsidies or support are required to provide unbundled loops in most cases.

Requiring that the local loop be provided on an unbundled basis stimulates the deployment of competitive alternatives much faster than would occur if new entrants

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<sup>24/</sup> American Library Association Comments at pp. 13-19.

are required to deploy their own network facilities to schools, libraries and health care providers. The provision of unbundled loops may be the best mechanism for bringing competition (and the lower prices and enhanced services that accompany competition) to rural schools, libraries and health care providers. It is important to emphasize that if unbundled loops are made available, competitive broadband services will become available from service providers (like MFS) who use the unbundled loop, computer companies who sell the hardware necessary to convert a metallic loop to broadband capabilities, and the incumbent providers who may have to reprice their broadband services to be competitive.

Incumbent local telephone companies might complain that requiring them to provide unbundled local loops at cost interferes with their ability to sell higher margin special access products, like ISDN which is priced many multiples above where an end-to-end metallic loop would be priced. Such an argument, however, is wrong for at least two reasons. First, provision of unbundled local loops will stimulate demand for advanced services that does not presently exist in part due to the incumbent provider's high special access prices. The incumbent local telephone company may well realize a revenue increase from this growth in demand. Second, the incumbent may have to reprice its special access and broadband services to be competitive with the alternatives that might be available using the unbundled local loops. Certainly, an incumbent local telephone company should not be compensated from a universal

service fund for reducing its prices to a competitive level, nor should the Commission implement policies designed to guarantee an incumbent firm's revenues in a competitive environment.

Even if an incumbent local telephone company must incur costs to upgrade its network to comply with such an unbundling requirement, it should bear its own costs and not recover them from a universal service fund or unbundled loop prices. General network upgrades are a common cost that should be recovered from all services rather than solely from competitors or a universal service fund. As a competitive local service provider, MFS engineers its network to provide advanced, high-speed services to its customers, and uses those services as a mechanism to attract and retain customers. MFS did not install a POTS only network, and it certainly did not receive subsidies from its competitors to finance its deployment of an advanced network. MFS did not expect to and should not recover its additional costs of installing a high-tech network from a universal service fund. Likewise, in a competitive environment, incumbent local telephone companies should not be allowed to recover the incremental costs of upgrading their networks from a federal universal service fund. Other competitive carriers are deploying networks capable of high-speed access, as well. For example, in its comments, Winstar, a wireless service provider indicated that its wireless network

had high-speed, broadband capabilities.<sup>25/</sup> A network upgrade to match or exceed the capabilities of modern competitors should not be funded with universal service subsidies provided by incumbent carriers' competitors

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**9. How can universal services support for schools, libraries, and health care providers be structured to promote competition?**

See response to Question 8, above.

**10. Should the resale prohibition in Section 254(h)(3) be construed to prohibit only the resale of services to the public for profit, and should it be construed so as to permit end user cost based fees for services? Would construction in this manner facilitate community networks and/or aggregation of purchasing power?**

The resale restrictions in 254(h)(3) provide that the discounted telecommunications services provided to schools, libraries or health care providers "may not be sold, resold, or otherwise transferred by such user in consideration for money or any other thing of value." This provision prohibits a schools from buying discounted telecommunications service and then selling or reselling it, but the Telecommunications Act does not specify whether these restrictions apply only to for-profit sales. These resale restriction issues, however, need not arise if MFS's proposal

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<sup>25/</sup> Winstar Comments at pp. 1-2.

for cost-based unbundled end-to-end metallic loops described in response to Question 8 is adopted.

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- 11. *If the answer to the first question in number 10 is "yes," should the discounts be available only for the traffic or network usage attributable to the educational entities that qualify for the Section 254 discounts?***

Yes, however, the problem of how to segregate eligible and ineligible circuits and traffic would not arise under MFS's proposal described in response to Question 8.

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- 12. *Should discounts be directed to the states in the form of block grants?***

No. See response to Question 8.

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- 13. *Should discounts for schools, libraries, and health care providers take the form of direct billing credits for telecommunications services provided to eligible institutions?***

See response to Question 8.

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- 14. If the discounts are disbursed as block grants to states or as direct billing credits for schools, libraries, and health care providers, what, if any, measures should be implemented to assure that the funds allocated for discounts are used for their intended purposes?**

Unless the Commission develops appropriate auditing mechanisms and oversees the use of discounted services by the thousands of schools, libraries and health care providers that might order such service, there is no way to assure that the funds allocated for discounts are used for the intended purposes. MFS believes that its proposal, described in response to Question 8 is a better mechanism than discounted offerings for providing access to advanced, broadband telecommunications services.

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- 15. What is the least administratively burdensome requirement that could be used to ensure that requests for supported telecommunications services are bona fide requests within the intent of Section 254(h)?**

If telecommunications services are provided on a deeply discounted basis, that will create economic incentives for organizations and individuals to seek ways to qualify for the discounted offerings. Mechanisms will have to be developed to distinguish between legitimate, bona fide requests for discounted offerings and offerings that should not qualify for the discounts. As described in its response to

Question 8, MFS believes that its proposal is a better mechanism than discounted offerings for providing access to advanced, broadband telecommunications services.

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- 16. What should be the base service to which discounts for schools and libraries are applied: (a) total service long-run incremental cost; (b) short-run incremental costs; (c) best commercially-available rate; (d) tariffed rate; (e) rate established through a competitively-bid contract in which schools and libraries participate; (f) lowest of group of the above; or (g) some other benchmark? How could the best commercially-available rate be ascertained, in light of the fact that many such rates may be established pursuant to confidential contractual arrangements?**

As described in response to Question 8, MFS believes that its proposal is superior to providing deeply discounted services to schools, libraries and health care providers. MFS's proposal eliminates the necessity of wrestling with the appropriate base to which the discount applies.

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- 17. How should discounts be applied, if at all, for schools and libraries and rural health care providers that are currently receiving special rates?**

See response to Question 8.

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- 18. What states have established discount programs for telecommunications services provided to schools, libraries, and health care providers? Describe the programs, including the measurable outcomes and the associated costs.**

MFS has no information that is responsive to this request.

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- 19. Should an additional discount be given to schools and libraries located in rural, insular, high cost and economically disadvantaged areas? What percentage of telecommunications services (e.g., Internet services) used by schools and libraries in such areas are or require toll calls?**

Additional discounts should not be applied to schools and libraries in rural, high cost and insular areas apart from the assistance such areas receive as a result of generic high-cost support. Universal service support should not become a program aimed at addressing the needs of economically disadvantaged schools. Rather, the general body of taxpayers, and the appropriate state and federal legislative agencies, should fund the needs of economically disadvantaged schools. It is inappropriate and beyond the scope of the Telecommunications Act to require telecommunications companies and telecommunications customers to bear the burden of financing economically disadvantaged schools. Moreover, a universal service program designed to fund schools based on economic need would probably run afoul of the Telecommunications Act's requirements that universal service support be "specific,

predictable and sufficient" since there would be no way to predict what needs schools would have on a year-to-year basis. For example, if school budgets are reduced in any single year, or decline due to on-going municipal financial difficulties (like Washington, D.C.) a larger proportion of schools could be considered economically disadvantaged, and thus, eligible for universal service support.

Internet services are interLATA information services. Generally, customers subscribe to an Internet service provider and use either dial-up or dedicated access to reach their service provider's router. Their service provider's router, in turn, is typically connected to other routers by being connected to a long distance carrier's high-speed backbone or the high-speed backbone provided by firms that specialize in aggregating Internet traffic and providing Internet providers with access to a high-speed data backbone. These long distance backbones typically transmit traffic to one or more peering points where Internet routers are interconnected and exchange traffic.<sup>26/</sup> Thus, virtually all Internet traffic involves a component of long distance transport although traditional per minute long distance charges are not paid by Internet customers for their use.

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<sup>26/</sup> The major peering points in the United States include MAE (Metropolitan Area Ethernet) East (in Washington, D.C.), MAE West (in San Jose, CA), MAE Chicago, MAE Dallas, Commercial Internet Exchange ("CIX" in Santa Clara, CA), Chicago NAP, and New York NAP.

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- 20. Should the Commission use some existing model to determine the degree to which a school is disadvantaged (e.g., Title I or the national school lunch program)? Which one? What, if any, modifications should the Commission make to that model?**

No. See response to Question 19. Universal service support envisioned in the Telecommunications Act is not designed to be a program for funding disadvantaged schools. No provisions in the Telecommunications Act require universal service assistance based on an evaluation of a school's economic status.

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- 21. Should the Commission use a sliding scale approach (i.e., along a continuum of need) or a step approach (e.g., the Lifeline assistance program or the national school lunch program) to allocate any additional consideration given to schools and libraries located in rural, insular, high-cost, and economically disadvantaged areas?**

No. See response to Questions 19 and 20.

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- 22. Should separate funding mechanisms be established for schools and libraries and for rural health care providers?**

Under MFS's proposal described in response to Question 8, it would not be necessary to develop separate funding mechanisms for health care providers and schools and libraries. However, the Telecommunications Act describes different levels

of contribution from universal service funding for schools and libraries and rural health care providers.

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- 23. *Are the cost estimates contained in the McKinsey Report and NII Kickstart Initiative an accurate funding estimate for the discount provisions for schools and libraries, assuming that tariffed rates are used as the base prices?***

MFS has no information that is responsive to this question.

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- 24. *Are there other cost estimates available that can serve as the basis for establishing a funding estimate for the discount provisions applicable to schools and libraries and to rural health care providers?***

See response to Question 8, above.

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- 25. *Are there any specific cost estimates that address the discount funding estimates for eligible private schools?***

MFS does not have information that is responsive to this question.

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### **III. HIGH COST FUND**

#### **A. General Questions**

- 26. *If the existing high-cost support mechanism remains in place (on either a permanent or temporary basis, what modifications, if any, are required to comply with the Telecommunications Act of 1996?***

MFS recommends that the existing high-cost support mechanisms be incorporated in a single fund as described in response to Questions 1-3.

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- 27. *If the high-cost support system is kept in place for rural areas, how should it be modified to target the fund better and consistently with the Telecommunications Act of 1996?***

See responses to Questions 1-3.

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- 28. *What are the potential advantages and disadvantages of basing the payments to competitive carriers on the book costs of the incumbent local exchange carrier operating in the same service area?***

Payments should not be based on the book or embedded costs of the incumbent local exchange carrier, but should be based on the costs of a service provider using the most efficient technology. This will create substantial motivation for the incumbent to improve if a new entrant that provides service using a more efficient technology (e.g., a digital, wireless loop) receives universal service support based on the proxy national cost. But, if universal service support is based on the incumbent provider's embedded costs, a new entrant might be able to price its services at its costs less the difference between its costs and the incumbent's costs.

For example, suppose a new entrant can provide service for \$25, but the incumbent can provide service for \$35. The national benchmark cost (or price) for universal service support should be \$25. Using the new entrant's technology, no universal service subsidies should be provided (to either the incumbent or the new entrant) since the census block cost do not exceed the national benchmark. In a competitive environment, the market price would equilibrate at \$25 regardless of the incumbent's embedded costs. However, if the new entrant can receive the \$10 subsidy that is based on the incumbent's costs, its net effective economic cost is only \$15. Thus, by using the incumbent's book costs as the basis of universal service support, prices would be artificially and inefficiently depressed far below the threshold "affordable" or competitive level of \$25.

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- 29. Should price cap companies be eligible for high-cost support, and if not, how would the exclusion of price cap carriers be consistent with the provisions of Section 214(e) of the Communications Act? In the alternative, should high-cost support be structured differently for price cap carriers than for other carriers?**

Any company that provides service to low income customers or high-cost service areas should be eligible to receive the universal service subsidies that flow to such customers.

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30. ***If price cap companies are not eligible for support or receive high-cost support on a different basis than other carriers, what should be the definition of a "price cap" company? Would companies participating in a state, but not a federal, price cap plan be deemed price cap companies? Should there be a distinction between carriers operating under price caps and carriers that have agreed, for a specified period of time, to limit increases in some of all rates as part of a "social contract" regulatory approach?***

See response to Question 29.

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31. ***If a bifurcated plan that would allow the use of book costs (instead of proxy costs) were used for rural companies, how should rural companies be defined?***

It is inappropriate to use the book costs of the incumbent provider to develop universal service support. See response to Question 28.

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32. ***If such a bifurcated approach is used, should those carriers initially allowed to use book costs eventually transition to a proxy system or a system of competitive bidding? If these companies are transitioned from book costs, how long should the transition be? What would be the basis for high-cost assistance to competitors under a bifurcated approach, both initially and during a transition period?***

See response to Question 28.

- 33. *If a proxy model is used, should carriers serving areas with subscription below a certain level continue to receive assistance at levels currently produced under the HCF and DEM weighting subsidies?***

Carriers should receive support payments for serving low income customers and customers who live in high-cost service areas. The amounts they receive under existing high-cost mechanisms or their current subscription levels should not affect the support they should receive from a proxy cost model.

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**B. Proxy Models**

- 34. *What, if any, programs (in addition to those aimed at high-cost areas) are needed to ensure that insular areas have affordable telecommunications service?***

Universal service support should be provided only to low income customers and customers who live in high-cost service areas as described in the responses to Questions 1-3. To the extent that insular areas have high costs, the high cost credit will reduce the end user's ultimate payment.

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- 35. *U S West has stated that an industry task force "could develop a final model process utilizing consensus model assumptions and input data," U S West comments at 10. Comment on U S West's statement, discussing potential legal issues and practical considerations in light of the requirement under the 1996 Act that the Commission take final action in***

***this proceeding within six months of the Joint's Board's recommended decision.***

The statutory requirement that the Commission take final action within six months does not prohibit it from establishing an industry task force to develop an appropriate proxy cost model to be used to develop universal service support. Said differently, the Joint Board and the Commission need not have a complete, comprehensive proxy cost model developed within the statutory time limits, but merely that they develop recommendations or rules implementing the universal service requirements of the Telecommunications Act. The Joint Board could comply with the statutory time frames by adopting MFS's proposal and recommending that universal service support be based on the difference between proxy costs and 130% of the national average proxy costs. It could recommend that an industry task be established, much like industry forums implement the technical details of Commission orders, to develop and finalize a consensus proxy cost model.

An industry forum to address the technical details of developing a proxy cost model could also be established to address on-going technical issues. For example, as technologies change, the proxy cost model should be updated. Similarly, as population densities change or as the composition of what should be included in the core functionalities of universal service changes, the industry forum could update the proxy cost model. There are several industry bodies that might sponsor such a forum.

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- 36. What proposals, if any, have been considered by interested parties to harmonize the differences among the various proxy cost proposals? What results have been achieved?**

MFS has no information that is responsive to this request.

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- 37. How does a proxy model determine costs for providing only the defined universal service core services?**

This may be an on-going technical issue that is best left to an industry forum to resolve as described in the response to Question 35.

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- 38. How should a proxy model evolve to account for changes in the definition of core services or in the technical capabilities of various types of facilities?**

This is an on-going technical issue that is best left to an industry forum to resolve as described in the response to Question 35.

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- 39. Should a proxy model account for the cost of access to advanced telecommunications and information services, as referenced in Section 254(b) of the Act? If so, how should this occur?**

Access to advanced telecommunications services can best be provided by offering local loops on an unbundled basis as described in response to Question 8. If

MFS's proposal is adopted, the proxy cost model would not have to be adjusted to account for the costs of access to advanced services.

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- 40. *If a proxy model is used, what, if any, measures are necessary to assure that urban rates and rates in rural, insular, and high-cost areas are reasonably comparable, as required in Section 254(b)(3) of the 1996 Act.***

Since it focuses on costs, a proxy cost model will provide little information about urban and rural rates.

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- 41. *How should support be calculated for those areas (e.g, insular areas and Alaska) that are not included under the proxy model?***

A properly constructed proxy cost model should be robust enough to accommodate all areas

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- 42. *Will support calculated using a proxy model provide sufficient incentive to support infrastructure development and maintain quality service?***

Yes, as long as the support is equally available to new entrants and incumbents. Incentives for infrastructure development will be diminished if universal service support is available only to incumbents or is used exclusively to maintain incumbent revenues or to profitability.

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- 43. Should there be recourse for companies whose book costs are substantially above the costs projected for them under a proxy model? If so, under what conditions (for example, at what cost levels above the proxy amount) should carriers be granted a waiver allowing alternative treatment? What standards should be used when considering such requests?**

Universal service support should not be designed to maintain the revenues or profitability of incumbent providers. It should be targeted to provide support to low income customers or customers who live in high-cost service areas. As described in response to Questions 1-3, a proxy cost model should be designed to reflect the costs of a competitor that uses the most efficient technology to provide supported services. Basing support on the most efficient technology creates incentives for the incumbent to improve the efficiency of its plant and operations. If the proxy cost model develops costs that are lower than the incumbent's costs, efficiency incentives would be destroyed if the incumbent were allowed to recover something more than the level indicated by the proxy cost model.

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- 44. How can a proxy model be modified to accommodate technological neutrality?**

This is an on-going technical issue that is best left to an industry forum as described in response to Question 35.

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- 45. *It is appropriate for a proxy model adopted by the Commission in this proceeding to be subject to proprietary restrictions, or must such a model be a public document?***

A proxy cost model should be independent of the costs, technologies and facilities used by any individual carrier, but should reflect the costs of a hypothetical competitor using the most efficient technology. As such, it should not include any data that is proprietary in nature. Also, see response to Question 28.

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- 46. *Should a proxy cost model be adopted if it is based on proprietary data that may not be available for public review?***

No. See responses to Questions 28 and 45.

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- 47. *If it is determined that proprietary data should not be employed in the proxy model, are there adequate data publicly available on current book costs to develop a proxy model? If so, identify the source(s) of such data.***

Book costs should not be used to develop a proxy cost model. See responses to Questions 28, 43 and 45.

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- 48. Should the materiality and potential importance of proprietary information be considered in evaluating the various models?**

See response to Question 43.

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**C. Competitive Bidding**

- 49. How would high-cost payments be determined under a system of competitive bidding in areas with no competition?**

As described in response to Questions 1-3, universal service support should be assigned to customers and not carriers. If universal service support is assigned to customers, it is unnecessary to develop a bidding process to apportion universal service support. The amount universal service support received by a carrier should depend entirely on the number of supported customers (low income customers or customers who live in high cost service areas) served by the carrier.

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- 50. How should a bidding system be structured in order to provide incentives for carriers to compete to submit the low bid for universal service support?**

A bidding system should not be adopted. See response to Question 49.

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- 51. *What, if any, safeguards should be adopted to ensure that large companies do not bid excessively low to drive out competition?***

See response to Question 49.

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- 52. *What safeguards should be adopted to ensure adequate quality of service under a system of competitive bidding?***

Competition provides the best safeguard. The plan should favor no carrier. See response to Question 49.

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- 53. *How is collusion avoided when using a competitive bid?***

See response to Question 49.

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- 54. *Should the structure of the auction differ if there are few bidders? If so, how?***

See response to Question 49.

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- 55. *How should the Commission determine the size of the areas within which eligible carriers bid for universal service support? What is the optional basis for determining the size of those areas, in order to avoid unfair***